

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
Interim Final 2/5/99
RCRA Corrective Action
Environmental Indicator (EI) RCRAInfo code (CA750)
Migration of Contaminated Groundwater Under Control

Facility Name: Simonds Industries Inc.
Facility Address: 641 Heller Drive, Newcomerstown, Tuscarawas County, Ohio
Facility EPA ID #: OHD018221853

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

X	If yes, check here and continue with #2 below
	If no, re-evaluate existing data, or
	If data are not available, skip to #8 and enter "IN" (more information needed) status code.

BACKGROUND

The former Simonds Industries site is located at 641 Heller Dr., Newcomerstown, Tuscarawas County, Ohio, at latitude N 40015'53" and longitude W 81036'28" (Site). The Site is approximately 38 acres and is located within the floodplain of the Tuscarawas River, which borders the southern portion of the property. The Site is bounded by residential properties to the north, residential and public properties to the west, and the (inactive) Newcomerstown Landfill to the east. River Street and Heller Drive form the western site boundary. The northern portion of the Site was where the buildings and other former manufacturing activities took place. The southern half of the Site (approximately 20 acres) is mostly overgrown with vegetation and was formerly the location of two lagoons and an on-site landfill. The areas of the lagoons and landfill have gone through RCRA closure. In general, the topography dips towards the Tuscarawas River. The remnants of former berms and dirt access roads surround the southern half of the Site and allow access to the former area from River Street. A United States Geological Service (USGS) river gauging station (USGS 03129000 Tuscarawas River at Newcomerstown OH) is located close to the southwest corner of the Site.

The Site was a metal file and rasp manufacturing facility dating back to 1860 and was likely used for metal working activities in the years prior. Simonds, and other entities such as Rex File, Heller Brothers, Wallace Murray Corporation, and Household Manufacturing Inc (HMI), manufactured hand tools at the Site for over 150 years until manufacturing operations ceased in 2007. Shortly thereafter, an entity named 641 Heller Drive LLC purchased the Site from Simonds at auction. The property was acquired in 2018 by the Village of Newcomerstown due to 641 Heller Drive LLC's failure to pay taxes. Simonds Cutting Tools manufactured steel files through a system of milling, machining, sharpening and hardening steel stock. Hazardous wastes and constituents were generated in the process, from a degreaser bath which used 1,1,1 trichloroethane (TCA) and from a hardening process which involved molten lead.

Historical manufacturing operations at the Site resulted in releases of volatile organic compounds (VOCs), specifically 1,1,1-Trichloroethane (1,1,1-TCA) to groundwater and releases of metals to soil.

A full history of the site remediation and Corrective Actions taken can be found in the Simonds – Corrective Action Measures Summary Report – DRAFT (February 21, 2019)

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EIs developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of “Migration of Contaminated Groundwater Under Control” EI

A positive “Migration of Contaminated Groundwater Under Control” EI determination (“YE” status code) indicates that the migration of “contaminated” groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original “area of contaminated groundwater” (for all groundwater “contamination” subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The “Migration of Contaminated Groundwater Under Control” EI pertains ONLY to the physical migration (i.e., further spread) of contaminated groundwater and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

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Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRAInfo national database ONLY as long as they remain true (i.e., RCRAInfo status codes must be changed when the regulatory authorities become aware of contrary information).

2. Is **groundwater** known or reasonably suspected to be “**contaminated**”¹ above appropriately protective “levels” (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

	If yes - continue after identifying key contaminants, citing appropriate “levels,” and referencing supporting documentation.
X	If no - skip to #8 and enter “YE” status code, after citing appropriate “levels,” and referencing supporting documentation to demonstrate that groundwater is not “contaminated.”
	If unknown - skip to #8 and enter “IN” status code.

Rationale and Reference(s):

The Simonds Site was a metal file and rasp manufacturing facility dating back to 1860 and was likely used for metal working activities in the years prior. Simonds, and other entities such as Rex File, Heller Brothers, Wallace Murray Corporation, and Household Manufacturing Inc (HMI), manufactured hand tools at the Site for over 150 years until manufacturing operations ceased in 2007.

A Ground Water Quality Assessment was performed in 1995 that showed the groundwater was contaminated with Volatile Organic Compounds (VOCs), primarily, 1,1,1-Trichloroethane (1,1,1-TCA) and its breakdown products. To help determine the extent of the groundwater plume additional wells were installed off-site.

On March 25, 2004, a Consent Order was issued that required Simonds to remediate the source and effects of hazardous waste contamination at the Site and provide abatement of any off-site migration of the contaminants, under an approved Ground Water Remediation and Monitoring Plan (GWRMP).

The GWRMP was approved on June 9, 2005, and implementation started in 2005 with required semi-annual community-wide sampling events and quarterly sampling of the source area well P-16. The GWRMP established remediation goals (RGs) for 1,1,1-TCA at 200 parts per billion (ppb) and its breakdown products (chloroethane = 21,000 ppb*, 1,1-dichloroethane (1,1-DCA) = 28 ppb*, 1,1-dichloroethene (1,1-DCE) = 7.0 ppb, and vinyl chloride = 2.0 ppb) as well as the following additional COCs: tetrachloroethene (PCE) 5.0 ppb, chloroform = 0.5 ppb, 1,2-dichloroethane (1,2-DCA) = 5.0 ppb, cis 1,2- dichloroethene (cis 1,2-DCE) = 70 ppb, methylene chloride = 5.0 ppb, and trichloroethene (TCE) = 5.0 ppb. (* *Alternative RGs, based on U.S. EPA Tap water Regional Screening Level (RSLs), were proposed for these compounds (21,000 ppb and 28 ppb, respectively) in the March 3, 2021, Request to Amend GWRMP and Work Plan for Monitoring Well Abandonment and AS/SVE Decommissioning (conditionally approved by OEPA on April 22, 2021).*

In 2007, following a limited subsurface investigation and in conjunction with the approved GWRMP, Simonds completed the installation of an on-site Air Sparge and Soil Vapor Extraction System (AS/SVE) to remediate VOCs in groundwater. The AS/SVE system included nine air sparge wells and nine soil vapor extraction wells.

Below is a brief timeline and historical summary of AS/SVE system operations on-site:

- May 2008 - AS/SVE system began continuous operation

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- Within one year of system operation, levels of 1,1,1-TCA in the source area well P-16 decreased from 2,300 ppb to 29 ppb (below the RG of 200 ppb)
- December 2009 – February 2011: Pulsed system operation was initiated to evaluate for potential rebound in COC concentrations
- February 2011 – September 2015: Due to rebound in COC concentrations to levels above RGs during pulsed operation, the system was returned to continuous operation
- September 2015: After satisfying conditions for system shutdown Simonds suspended operation of the AS/SVE system, as outlined in Sections 3.2.3.1 and 3.2.3.2 of the GWRMP and entered the post remediation monitoring phase of the work plan.

Post-remediation monitoring was conducted to observe potential long-term rebound and monitor long-term efficacy of treatment. Presently, all COCs are below RGs in all on-site and off-site wells, including the source area well P-16. There is no evidence of rebounding VOC concentrations. The AS/SVE system has effectively treated groundwater contamination both on-site and offsite.

Simonds has completed all of the groundwater monitoring requirements that were established by the GWRMP with three consecutive years of groundwater monitoring events where all VOC concentrations have been at or below the RGs. The criteria outlined in Sections 3.2.3.1 and 3.2.3.2 of the GWRMP for groundwater treatment have been met and no additional groundwater monitoring is required at the site.

On November 2, 2021, Ohio EPA requested that Simonds submit a workplan to properly abandon all monitoring wells and decommission the AS/SVE groundwater treatment system in accordance with Ohio EPA guidance.

References:

Ohio EPA DERR Files:

- First Quarter 2021, 1P-16 Groundwater Monitoring Report (April 28, 2021)
<http://edocpub.epa.ohio.gov/publicportal/ViewDocument.aspx?docid=1562613>
- Simonds – Corrective Action Measures Summary Report – DRAFT (February 21, 2019)
<http://edocpub.epa.ohio.gov/publicportal/ViewDocument.aspx?docid=1304147>
- Ground Water Remediation and Monitoring Plan (January 31, 2005)
<http://edocpub.epa.ohio.gov/publicportal/ViewDocument.aspx?docid=619793>
- Consent Order (March 25, 2004)
<http://edocpub.epa.ohio.gov/publicportal/ViewDocument.aspx?docid=939282>

Footnotes:

¹“Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate “levels” (appropriate for the protection of the groundwater resource and its beneficial uses).

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3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within “existing area of contaminated groundwater”² as defined by the monitoring locations designated at the time of this determination)?

	If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the “existing area of groundwater contamination” ²).
	If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the “existing area of groundwater contamination” ²) - skip to #8 and enter “NO” status code, after providing an explanation.
	If unknown - skip to #8 and enter “IN” status code.

Rationale and Reference(s):

² “existing area of contaminated groundwater” is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of “contamination” that can and will be sampled/tested in the future to physically verify that all “contaminated” groundwater remains within this area, and that the further migration of “contaminated” groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

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4. Does “contaminated” groundwater **discharge** into **surface water** bodies?

	If yes - continue after identifying potentially affected surface water bodies.
	If no - skip to #7 (and enter a “YE” status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater “contamination” does not enter surface water bodies.
	If unknown - skip to #8 and enter “IN” status code.

Rationale and Reference(s):

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5. Is the **discharge** of “contaminated” groundwater into surface water likely to be “**insignificant**” (i.e., the maximum concentration³ of each contaminant discharging into surface water is less than 10 times their appropriate groundwater “level,” and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

	If yes - skip to #7 (and enter “YE” status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration ³ of <u>key</u> contaminants discharged above their groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.
	If no - (the discharge of “contaminated” groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration ³ of <u>each</u> contaminant discharged above its groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations ³ greater than 100 times their appropriate groundwater “levels,” the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.
	If unknown - enter “IN” status code in #8.

Rationale and Reference(s):

³ As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

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6. Can the **discharge** of “contaminated” groundwater into surface water be shown to be “**currently acceptable**” (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented⁴)?

	If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site’s surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment, ⁵ appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment “levels,” as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.
	If no - (the discharge of “contaminated” groundwater cannot be shown to be “ currently acceptable ”) - skip to #8 and enter “NO” status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.
	If unknown - skip to 8 and enter “IN” status code.

Rationale and Reference(s):

⁴ Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

⁵ The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

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7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the “existing area of contaminated groundwater?”

	If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the “existing area of groundwater contamination.”
	If no - enter “NO” status code in #8.
	If unknown - enter “IN” status code in #8.

Rationale and Reference(s):

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8. Check the appropriate RCRAInfo status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750) and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

X	YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI Determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the Simonds Industries Inc. site, EPA ID No.: OHD018221853 located at 641 Heller Drive, Newcomerstown, Tuscarawas County, Ohio. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater". This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.
	NO - Unacceptable migration of contaminated groundwater is observed or expected.
	IN - More information is needed to make a determination.

Completed by: Robin Wiley Date: 12/10/2021
(Signature)

Robin Wiley
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Environmental Specialist
(Title)

Supervisor: Erik Hagen Date: 07/14/2022
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